

Analysis of Nucleotide Phosphates using ACQUITY UPLC BEH Amide Columns

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

Abstract

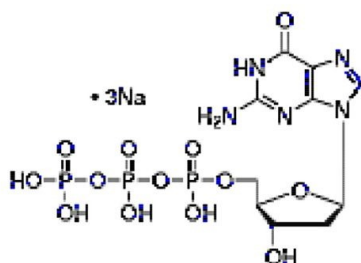
This application brief highlights analysis of nucleotide phosphates.

Introduction

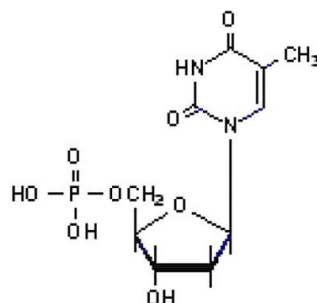
Compounds analysed in this application brief :

1. 2'-Deoxyguanosine-5'-Triphosphate Trisodium Salt Dihydrate (dGTP) 100 µg/mL
2. Thymidine 5'-monophosphate (TMP) 10 µg/mL
3. 2'-Deoxyadenosine 5'-monophosphate (dAMP) 10 µg/mL
4. 2'-Deoxycytidine 5'-monophosphate sodium salt (dCMP) 25 µg/mL
5. 2'-Deoxyguanosine 5'-monophosphate sodium salt hydrate (dGMP) 15 µg/mL
6. 2'-Deoxyadenosine 5'-diphosphate sodium salt (dADP) 15 µg/mL

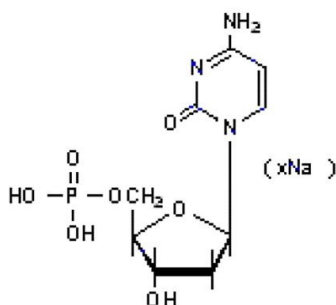
Structures



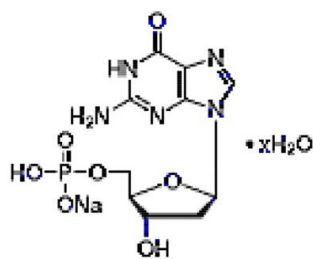
**2'-Deoxyguanosine-5'-
Triphosphate Trisodium
Salt Dihydrate (dGTP)**



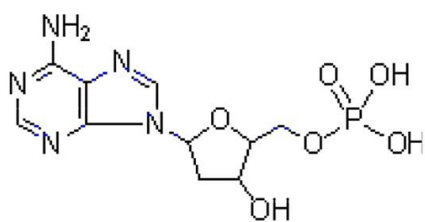
**Thymidine 5'-mono-
phosphate (TMP)**



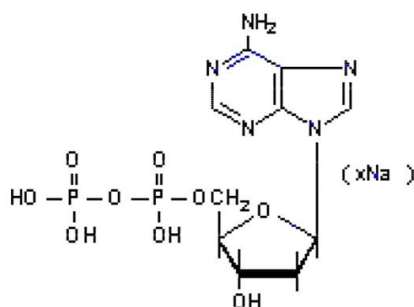
**2'-Deoxycytidine
5'-monophosphate
sodium salt (dCMP)**



**2'-Deoxyguanosine
5'-monophosphate sodium
salt hydrate (dGMP)**



**2'-Deoxyadenosine
5'-monophosphate
(dAMP)**



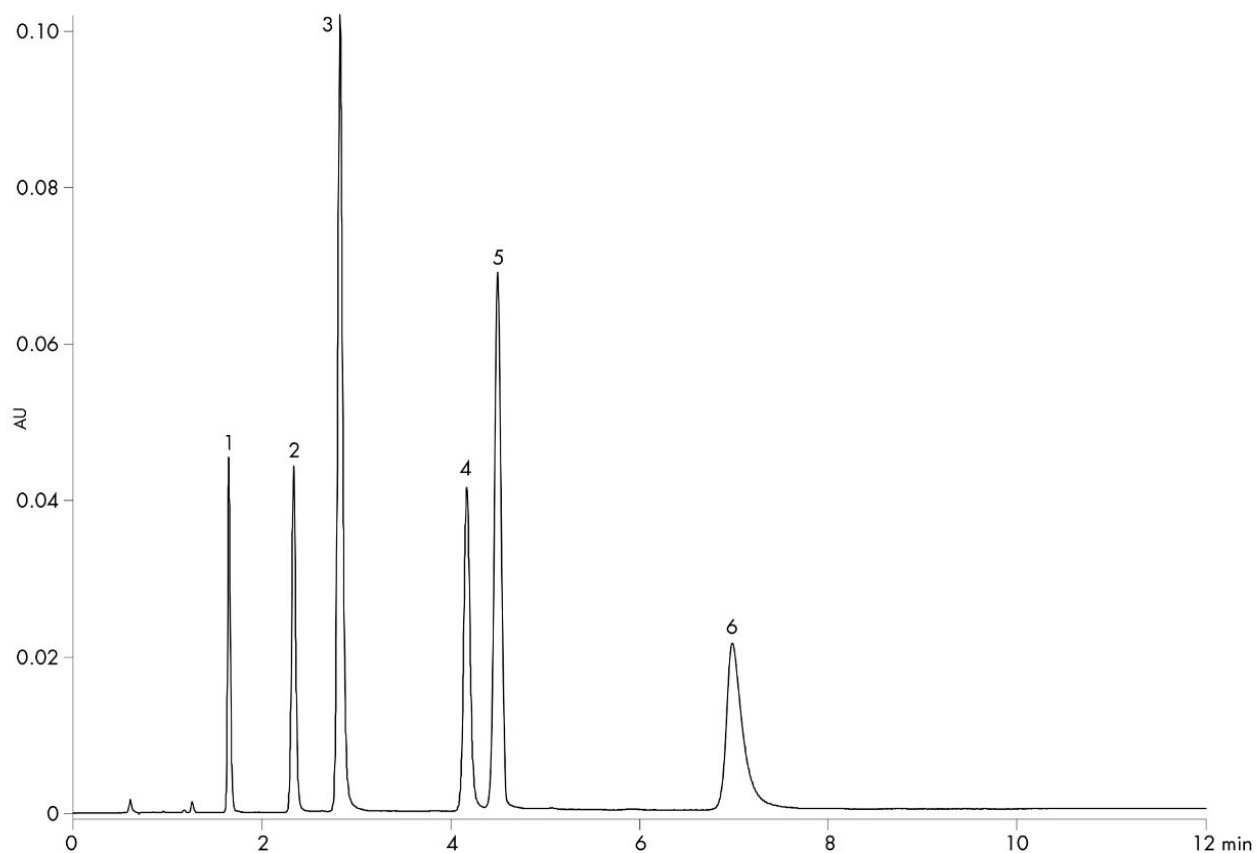
**2'-Deoxyadenosine
5'-diphosphate sodium
salt (dADP)**

Experimental

Test Conditions

Column:	ACQUITY UPLC BEH Amide, 2.1 x 150 mm, 1.7 μ m
Part Number:	186004802
Isocratic Mobile Phase:	80/20 MeCN/H ₂ O with 2 mM KH ₂ PO ₄
Flow Rate:	0.5 mL/min
Injection Volume:	5.0 μ L (PLNO)
Sample Diluent:	80/20 MeCN/H ₂ O with 10 mM CH ₃ COONH ₄ and 0.02% CH ₃ COOH
Column Temperature:	25 °C
Weak Needle Wash:	95/5 MeCN/H ₂ O
Detection:	UV @ 254 nm
Sampling Rate:	20 points/sec
Filter Time Constant:	0.2
Instrument:	Waters ACQUITY UPLC with ACQUITY UPLC PDA Detector

Results and Discussion



1. 2'-Deoxyguanosine-5'-Triphosphate Trisodium Salt Dihydrate (dGTP) 100 µg/mL, 2. Thymidine 5'-monophosphate (TMP) 10 µg/mL, 3. 2'-Deoxyadenosine 5'-monophosphate (dAMP) 10 µg/mL, 4. 2'-Deoxycytidine 5'-monophosphate sodium salt (dCMP) 25 µg/mL, 5. 2'-Deoxyguanosine 5'-monophosphate sodium salt hydrate (dGMP) 15 µg/mL, 6. 2'-Deoxyadenosine 5'-diphosphate sodium salt (dADP) 15 µg/mL

Featured Products

- [ACQUITY UPLC System <https://www.waters.com/514207>](https://www.waters.com/514207)
- [ACQUITY UPLC PDA Detector <https://www.waters.com/514225>](https://www.waters.com/514225)

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